DOCUMENT RESUME

ED 324 733 CS 507 311

AUTHOR Neer, Michael R.
TITLE The Role of Indirect Tests in Assessing Communication Competence.
PUB DATE 3 Nov 90
NOTE 18p.; Paper presented at the Annual Meeting of the Speech Communication Association (76th, Chicago, IL, November 1-4, 1990).
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Seniors; Communication Research; Higher Education; Mass Media; *Speech Communication; *Student Characteristics; *Student Evaluation; *Test Reliability
IDENTIFIERS *Communication Competencies; *Competency Tests; Speech Communication Education; University of Missouri Kansas City

ABSTRACT

A study tested an indirect assessment instrument in examining the cognitive component of communication competence. The instrument was administered to 36 seniors graduating in speech communication and mass communication at the University of Missouri-Kansas City. Findings revealed that test performance was mediated by overall grade point average, non-traditional methods of instruction (i.e., internship), and student enrollment patterns (i.e., number of years needed to complete the degree program and full-time versus part-time employment). Should additional testing confirm the findings of the study, indirect tests may be administered with reasonable confidence as diagnostic measures for placing students in the proper courses. Several lines of research may aid in more effectively administering indirect tests at the departmental level. (SR)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED324733

The Role of Indirect Tests in Assessing Communication Competence*

A Paper Presented to the Speech Communication Association
76th Annual Meeting
Chicago, Illinois
November 3, 1990

Sponsor: Committee on Assessment and Testing
Educational Policies Board

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Michael R. Neer

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Abstract

The study tested an indirect assessment instrument in examining the cognitive component of communication competence. Findings revealed that test performance was mediated by overall grade point average, non-traditional methods of instruction (i.e., internship), and student enrollment patterns (i.e., number of years needed to complete the degree program and full-time vs. part-time employment) The study concludes by discussing the role of indirect tests in relation to direct-based behavioral assessments of communication competence. Several lines of research are suggested so that indirect tests may be more effectively administered at the departmental level.

CS507311

*Michael R. Neer is an Associate Professor of Communication Studies at the University of Missouri at Kansas City, 5100 Rockhill Rd., Kansas City, MO 64110.

THE ROLE OF INDIRECT TESTS IN ASSESSING COMMUNICATION COMPETENCE

INTRODUCTION

The University of Missouri system, in October 1987, required that all four of its campuses begin conducting annual assessments of all seniors. The assessment was mandated by the Governor as a means of determining how effectively the university was fulfilling its mission of providing students with a quality education. The assessment was therefore designed to measure whether students have received sufficient instruction in areas defined as essential to a well-rounded education by each academic unit of the university. The purpose of this study is to report findings for the assessment test developed in communication at the Kansas City campus of the University of Missouri system.

At the Kansas City campus (UMKC), assessment of basic English proficiency has been in operation for several years. Students who fail to achieve at least a grade of "B" in the two university-required composition courses are then required to take the university's english proficiency test administered by the English department. However, with the state-mandated assessment, university-wide testing was required on two levels: (1) individualized assessments developed by each academic unit within the university, and (2) standardized testing in general education through objective testing of all graduating seniors' abilities in problem-solving, clarifying values, functioning within social institutions, using science and technology, and using the arts. The standardized test used to assess these areas was the College Outcome Measures Project (COMP) developed by the American College Testing program.

Assessment is by no means a novel idea or area of research within the

communication discipline. As early as 1978, an issue of Communication Education was devoted to communication literacy (see volume 31, 1978), and the first systematic review and evaluation of current assessment tests was reported in the text Assessing Functional Communication (Larson, Backlund, Redmond, & Barbour, 1978). The most ambitious asssessment test of communication competence developed to date is perhaps the CCAI (Communication Competency Assessment Instrument) (Rubin, 1980, 1981, 1982, & 1985). The CCAI has demonstrated reliability and validity as an assessment of behavioral competence in communication. The instrument assesses communication competence along four dimensions of functional competence: communication codes, oral message evaluation, basic speech communication skills, and human relations.

The assessment instrument developed for this present study is an indirect-based evaluation similar to that developed by Scafe and Siler (1979). Thus, the assessment test was a written objective test and not a direct test involving instructor-based observation of communication performance. Although indirect tests do not provide a means of identifying behavioral deficiencies in communication, they may be used to measure cognitive communication ability as an underlying component of communication competence. For instance, a recent study (Rubin, 1985) reported that scores on a self-report scale of communication knowledge correlated at .52 with the behavior-based CCAI. These findings suggest that knowledge of how to communicate, in part, predicts how one actually communicates. While cognitive ability may not be used as a singular predictor of communication competence, indirect tests may be appropriate for diagnosing cognitive deficiencies contributing to behavioral incompetence.

The communication studies department at the Kansas City campus developed its assessment test for diagnostic purposes. That is, we were concerned with developing a placement test for incoming transfer students who may have completed the required core at other four-year institutions and two-year community colleges. The test also was intended for eventual use in diagnosing students' cognitive competence relevant to advanced coursework in public speaking, speech and mass communication. Although enrollment would not be denied on the basis of assessment scores, the assessment would be used to determine if basic theoretical principles learned in the required core courses need to be reintroduced before proficiency may be attained in the advanced courses.

METHOD

The department of Communication Studies consists of two areas of emphasis: speech communication and mass communication. Although each emphasis is intended to fulfill uniquely different educational objectives, all graduating seniors are expected to demonstrate proficiency in basic communication competencies. These include two required core courses in oral competence (public speaking) and basic communication theory. These two courses along with introduction to mass communication and introduction to media writing represent two additional competencies essential for media professionals. Collectively, all four courses comprised the assessment test evaluated in this report. [1]

Test Construction

The four-part test consisted of multiple choice items (85 percent of the test) and one short essay question on principles of effective media writing. All four parts were equally weighed at 30 points or a 120-point

total. The test was constructed by a committee of faculty who regularly instruct the four courses. A pool of over 200 items was initially reviewed and eventually narrowed to 120 by committee consensus. Items were selected on the basis of key elements of instruction, established course objectives, and on the basis of recurrent themes discussed in lecture and in the texts.[2] In constructing the test, syllabi were reviewed so that questions would match the major learning objectives set in each course. The review of textbooks followed a similar procedure in question selection. That is, only those chapters or sections of a text emphasized in class lecture and course examinations were included in the assessment test. All texts in these courses have been regularly used over a four-year period thus ensuring a consistent testing focus. Consistency was further ensured since each course has been regularly taught by no more than two instructors, each of whom have developed a common syllabus for the course.

Test Design

The two required courses focus on basic principles of public speaking (e.g., message preparation, audience analysis, speaker credibility, thesis development, and speech organization) and communication theory (e.g., perception, language processes, nonverbal communication, relational development, and conflict). The mass communication core courses focus on basic mass communication theory (e.g., media history, media impact, first amendment issues, media structure, and media news and advertising processes) and principles of media writing (e.g., media writing style relating to news, advertising, press releases, and other forms of writing for the media).

Approximately one-third of each test component included items that required synthesis and application of course content as opposed to simple

recall and recognition. The oral competence component required students to analyze speaking situations and select the most effective means of designing an orally-communicated message. For instance, students were provided sample speaking situations and required to select the most appropriate forms of support (i.e., testimonial, statistical, anecdotal) or organizational format most appropriate for structuring message content. Other items required correct identification of organizational formats and supporting materials. Thus, the public speaking component targeted several criteria listed as essential in assessment testing, including identifying main points, expressing and defending evidence, and organizing clear messages (see for example: Bassett, Whittington, & Staton-Spicer, 1978).

Several of the basic communication theory items also required students to analyze underlying causes of communication conflict in case study situations and select possible remedies. Half of the communication theory items focused on several components of communication competence including empathy, behavioral flexibility, and interaction management (see for example: Larson, 1978; Weimann, 1978). Remaining items covered material from the required text. The mass communication theory items focused on the role and the effects of modern communication media and historical development of contemporary media. The writing component also included a short essay question requiring students to differentiate the differences in writing style between oral and written media.

RESULTS

Test Reliability

Reliability estimates demonstrate that the assessment is a moderately reliable measure of test performance. Table 1 reports correlations among

the four part test with KR-20 reliability estimates on the diagonal. Descriptive data revealed a mean score of 83.68 (S.D. = 8.57, Median = 85.50, Range = 96 - 62, S.E.M. = 1.62) or nearly a 70 percent average with the high score of 96 representing 80 percent. Similar statistics were observed with each test component; each yielded a mean score between 20.4 and 21.9 with scoring ranges from 10 through 27. The generally low scores may, in part, reflect the moderate reliability of the test. When the thirteen least reliable items were deleted, the reliability increased to .80 with the mean score increasing to 79.79 or 75 percent and the median also increasing to 75 percent. Furthermore, the public speaking component increased in reliability to .82 when the least reliable items were deleted. The remaining components also resulted in higher reliabilities, although none were as high as the public speaking component (i.e., .66 to .74).

Mediators of Test Performance

Several variables were tested as potential mediators of performance. The majority of these did not affect scores (i.e., respondent sex, number of transfer hours, number of major hours completed above the 36 minimum, academic minor, and academic scholarships awarded to students).

One mediator in particular, grade point average (GPA), did influence performance on all four parts of the assessment. When overall grade point average was dichotomized above 3.12 (n = 19) and below 2.88 (n = 17), the consistent finding was that students with higher GPA's scored higher on all four test components and thus scored higher on the test composite (Low GPA = 78.87, High GPA = 85.83, SS = 268.16, MS = 268.16, F = 4.10, p = .05). GPA was next treated as an interval-based variable by returning the dichotomized scores to their original raw scores. This procedure was selected so that

the strength of relationship between GPA and the assessment test could be determined. GPA correlated between .35 and .48 with all components except media writing (r = .21, p = ns). More specifically, as regression demonstrates, for every increase in GPA of one point, assessment scores increased by six points (MR = .44, R-squared = .194, B = .06, F = 6.52, p = .007, Constant = 71.51). [3]

Two additional variables mediated test scores but did so less consistently than GPA. First, students completing an internship scored higher on the speech communication theory (Internship = 20.53, No Internship = 18.27, SS/MS = 33.13, F = 4.91, p = .03) and the mass communication theory component (Internship = 20.80, No Internship = 18.09, SS/MS = 46.57, F = 5.81, p = .02). While we cannot directly claim that the internship is responsible for higher test scores, it should be noted that the internship is designed to help students sharpen their theoretical understanding of communication as well as provide them an applied context in which to experiment with communication concepts and principles. A second mediator to affect assessment scores was full versus part-time employment. That is, students working part-time scored higher on the media writing component (Part-time = 22.61, Full-time = 19.27, SS/MS = 22.34, F = 3.24, p = .08). [4]

A final analysis entered all mediators in a regression model as predictors of the test components and test composite. While none of the models yielded significance due to the large number of predictors tested, multiple correlations with the four components were all above .60 (R-squared = .36), thus suggesting that the mediators, collectively, partially explain test scores. Individual mediators did predict assessment scores when stepwise regression was attempted. For instance, the speech communication theory

component was predicted by number of years needed to complete the degree program ($F = 3.45$, $df = 10.36$, part $r = -.29$, $p = .07$). This finding demonstrates that the longer students take to complete the degree, the lower their scores. Also, number of years needed to complete the degree (i.e., 4-5 years vs. 6-10 years) yielded similar results with the oral competence or public speaking component ($F = 7.06$, $df = 2.34$, part $r = -.39$, $p = .01$).

DISCUSSION

Findings in this study offer several important implications on the role of indirect assessments on student learning. At the level of departmental advising, for instance, students should be encouraged not to seek full-time employment when enrolled in the media writing course,or , if needing to work full-time, be encouraged to enroll in the course if they can reduce the number of other courses they enroll. Currently, many students work full-time and enroll in an average of nine hours each semester. However, the two instructors who teach this course concur that the weekly writing assignments require a commitment of time and energy to complete successfully and master basic writing principles needed in later course assignments. Students working full-time, although passing the course, may not master writing principles because of an already overloaded work and school schedule.

Ideally, students should be encouraged to graduate in four years. However, this may not be practical for students who must finance much or all of their education. The next best advice would be to wait as long as possible to take the required core courses to help guard against information loss. The underlying issue, however, is not retention of information since decay may occur whether students enroll in these courses early

or late in their coursework (i.e., most students now complete the core their freshman year which may become problematic if requiring more than four years to graduate). Instead, the issue is whether students are provided an opportunity to test their new-founded knowledge once they complete a course. At the level of program administration, departmental policy may require students to complete an internship or practicum in which the application of course content is stressed. Should a required internship be administratively unmanageable or not deemed relevant to a student's degree program, other alternatives are available. For instance, a 1-3 credit senior seminar for graduating seniors may be more realistic. A seminar may include writing assignments to enhance writing competence and out-of-class speaking assignments to enhance oral competence. Another alternative may include comprehensive testing in all courses so that students are encouraged to retain the information they have learned.

Confirmation of these recommendations may require testing with additional mediators. Universities that admit a large number of transfer students from nearby two- and four-year institutions, for example, also may wish to assess whether completing the required core elsewhere affects test performance. Transfer credit was tested in this study but yielded too small a sub-sample (n = 6) for analysis. Comparison of overall GPA with departmental GPA also could be examined since overall GPA only accounted for 19 percent of the variance in test scores. And, university entrance and graduation requirements (i.e., standardized testing with normative tests and the breadth of required university core) are other candidates for testing. Examination of these variables may better determine whether the mediators tested in this study operate in conjunction with other untested variables.[5]

A final factor not consistently controlled in this study also may have influenced assessment scores. Nearly one-third of each test component was constructed from text material. These items would not be generalizable to institutions or courses not using these texts. Several of the items also may suffer a jargon-bias or a content emphasis bias and thus not reflect a generalized testing context as is recommended with assessment tests (Backlund, Brown, Gurry, & Jandt, 1982). On the other hand, assessment tests using select texts may be defended as partial predictors of academic success so long as they are consistent with the educational objectives of an institution (e.g., preparing students for non-academic careers in the media or as diagnostic measures for assessing students' competencies before they enroll in advanced coursework) and are used in conjunction with direct assessments of communication ability. The one test that best meets the requirements of assessment testing is the oral competence component; it is the most jargon- and text-free of the four components.

Assessment tests are only one means of determining students' competencies. On the other hand, GPA alone may not adequately reflect students' ability to apply what they have learned in situations beyond the classroom. Findings reported in this study are particularly important in light of the fact that GPA did not yield significant differences with other mediators found to affect test scores. These findings strongly suggest that GPA alone does not offset the effects of information loss while enrollment in an internship does. More importantly, these findings also suggest that GPA may not improve students' ability to apply course content they have learned. Thus, the relationship between the cognitive and the behavioral components of

learning may prove a fruitful line of research, particularly in identifying if certain cognitive components are more important than others in influencing behavioral performance (e.g., if organizational skills are more important than delivery skills).

It should be emphasized that findings in this study may be more typical of non-traditional universities than other institutions in which fewer students work full-time or require more than four years to graduate. The factors found to mediate assessment performance in this study may therefore hold more direct value for structuring the learning experience at a non-traditional university. While it may appear premature to report findings for an assessment based on only 36 students and a single year of testing, important factors mediating the learning experience at a non-traditional university have been isolated in this study. Should additional testing confirm the findings reported in this study, indirect tests may be administered with reasonable confidence as diagnostic measures for placing transfer students in appropriate courses and as a screening test for determining the amount of theoretical background information to include in advanced courses (for students who have completed the required core course as many as three years earlier).

In summary, this assessment test has yielded several instructive findings regarding certain factors which mediate learning. These factors may, indeed, be as crucial to learning as the actual content that is learned. That is, the learning process itself may be strongly mediated by the format (i.e., number of years needed to graduate, student employment) through which students acquire their education. One of our goals as educators, particularly at non-traditional universities, should be that of identifying those

factors through which the educational experience may be most effectively administered. While many of these factors lie beyond our immediate control (e.g., student employment), the factors which impede learning should be identified and counteracted through appropriate course design (e.g., comprehensive testing, reviewing basic content learned in core courses) and departmental procedures (e.g., senior seminar). Thus, one of the primary values of assessment, in addition to evaluating instructional effectiveness, in discovering additional ways in which we may best structure how the educational experience is processed.

Footnotes

[1]Four students completed the speech communication assessment--too small a number for comparison to the 36 who completed the mass communication assessment. However, analysis of overall scores revealed descriptive statistics similar to students taking the mass communication test.

[2]A copy of the 20-page mass- and speech communication booklets are available from the author.

[3]GPA was entered as a whole number without decimals in the model, thus explaining the B term in the regression model.

[4]Univariate analysis of variance was selected over the more stringent multivariate analysis of variance in order to identify trends within the data so that preliminary decisions may be made regarding mediators to include in future assessments. However, multivariate analysis approached significance with GPA ($p = .07$).

[5]Assessment scores could not be compared with the COMP because those results have not been made available, as yet, by the university.

References

Backlund, P.M., Brown, K.L., Gurry, J., & Jandt, F. (1982). Recommendations for assessing speaking and listening skills. Communication Education, 31, 9-17.

Bassett, R.F., Whittington, N., & Staton-Spicer, A. (1978). The basics of speaking and listening for high school graduates: What should be assessed. Communication Education, 27, 293-303.

Larson, C.E. (1978). Problems in assessing functional communication. Communication Education, 27, 304-309.

Larson, C.E., Backlund, P.M., Redmond, M., & Barbour, A. (1978). Assessing functional communication. Urbana, Ill.: ERIC, 1978.

Rubin, R.B. (1980). The Communication Competency Assessment Instrument. Paper presented at the meeting of the Speech Communication Association, New York, November 1980.

Rubin, R.B. (1981). Assessing speaking and listening competence at the college level: The Communication Competency Assessment Instrument. Paper presented at the meeting of the International Communication Association, Minneapolis, May 1981.

Rubin, R.B. (1982). Assessing speaking and listening competence at the college level: The Communication Competency Assessment Instrument. Communication Education, 31, 19-32.

Rubin, R.B. (1985). Validity of the Communication Competency Assessment Instrument. Communication Monographs, 52, 173-185.

Scafe, M., & Siler, I.C. (1979). The development of a communication competency test at the University of Oklahoma. Paper presented at the meeting of the Central States Speech Association, St. Louis, April 1979.

Weimann, J.M. (1978). Needed research and training in speaking and listening. Communication Education, 27, 310-315.

Table 1

Correlations and Reliability Estimates*

	Oral	Comm. Theory	Mass Theory	Writing	Composite
Oral	(.71)	.47	.31	.51	.74
Comm. Theory		(.61)	.30	.47	.71
Mass Theory			(.66)	.52	.48
Writing				(.66)	.74
Composite					(.75)

*p = .01 level or higher